Insuring Rural America:
Health Insurance Challenges and Opportunities

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Outline

• Motivation for Today
• Background
  • history
  • data
• Economic Theory
  • cautions from insurance literature
  • the potential of regulated markets
• Rural-Specific Issues
  • small risk pools
  • network formation and adequacy
• Real-World Rural Impact
  • when the urban-centric market model is applied
• Policy Opportunities and Recommendations
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Motivation for Today

• The popular press, academics, and government agencies have all called attention to the lack of health insurance options in some rural counties at various points of time and across various programs.
Figure 1. Second-Lowest Silver Adjusted Premium Increases, by Population Density of Rating Area
Motivation for Today

Figure 1
Counts with No Medicare Advantage Insurers in 2017 and Potentially No Marketplace Insurers in 2018


Where the Obamacare exchanges lost insurers for 2018

By Kim Soffen and Kevin Uhrmacher
Updated Oct. 10, 2017

After months of back-and-forth, every county nationwide will have an insurer in their ACA marketplace in 2018.
Motivation for Today

The FEHB Program includes national and state-specific plans. The latter can choose at the county level where to offer coverage.

<table>
<thead>
<tr>
<th>Number of state-specific plans in county</th>
<th>Number of counties</th>
<th>Percent of counties</th>
<th>Mean percent of enrollees in national plans</th>
<th>&lt;50</th>
<th>50-59.9</th>
<th>60-69.9</th>
<th>70-79.9</th>
<th>80-89.9</th>
<th>90-100</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>82</td>
<td>3</td>
<td>100.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1</td>
<td>808*</td>
<td>26</td>
<td>988</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>99.6</td>
</tr>
<tr>
<td>2</td>
<td>1,032</td>
<td>33</td>
<td>974</td>
<td>0.3</td>
<td>0.5</td>
<td>0.0</td>
<td>0.4</td>
<td>0.4</td>
<td>35.6</td>
</tr>
<tr>
<td>3</td>
<td>534</td>
<td>17</td>
<td>856</td>
<td>5.7</td>
<td>3.1</td>
<td>0.0</td>
<td>7.0</td>
<td>12.5</td>
<td>65.4</td>
</tr>
<tr>
<td>4</td>
<td>326</td>
<td>10</td>
<td>820</td>
<td>10.6</td>
<td>1.4</td>
<td>8.2</td>
<td>14.9</td>
<td>22.9</td>
<td>41.9</td>
</tr>
<tr>
<td>5</td>
<td>168</td>
<td>5</td>
<td>752</td>
<td>11.2</td>
<td>8.6</td>
<td>16.2</td>
<td>9.9</td>
<td>34.9</td>
<td>19.4</td>
</tr>
<tr>
<td>≥5</td>
<td>191</td>
<td>6</td>
<td>598</td>
<td>23.9</td>
<td>27.0</td>
<td>26.7</td>
<td>15.3</td>
<td>4.1</td>
<td>2.9</td>
</tr>
</tbody>
</table>

**Source:** Authors' analysis of Federal Employees Health Benefits Program enrollment files obtained from the Office of Personnel Management. **Notes:** Standard and high options offered by a single firm are counted as one plan. National plans include certain nationally available plans open only to specific groups. Not all percentages sum to 100 because of rounding. This number includes 692 counties whose only choice is Aetna's high-deductible plan, which in many counties has no enrollees.
Motivation for Today

• The goal of our presentation is to provide an economics-based interpretation of the problem and, on that basis, to discuss possible policy solutions.
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Background

• In the 1980s, after the implementation of Medicaid, Medicare, and FEHBP, concerns rose about containing health care costs, and in particular in making them a predictable part of the budget.
  • This was one of the original motivations to contract with private companies via a capitated payment.

• In addition, Congress sought to increase consumer choice by establishing a market-like structure within each program that encouraged participation from multiple insurance firms competing against each other for business.

• The motivation behind these efforts came from a view that competition has worked well in many other sectors to contain cost, improving choices, while preserving quality.
Background

• As technological improvements over the last several decades led to increasingly expensive treatments this raised costs particularly in the upper tail of the cost distribution. Private companies had increased incentive to behave strategically.

<table>
<thead>
<tr>
<th>Mean Expenditures per Person as a Percentage of Per Capita Income</th>
<th>1970</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 1 percent</td>
<td>204%</td>
<td>355%</td>
</tr>
<tr>
<td>Top 5 percent</td>
<td>78%</td>
<td>157%</td>
</tr>
<tr>
<td>Top 10 percent</td>
<td>51%</td>
<td>103%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean Expenditures per Person by Quartile</th>
<th>1970</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top quartile</td>
<td>$836</td>
<td>$16,317</td>
</tr>
<tr>
<td>Third quartile</td>
<td>$106</td>
<td>$1,986</td>
</tr>
<tr>
<td>Second quartile</td>
<td>$36</td>
<td>$487</td>
</tr>
<tr>
<td>Bottom quartile</td>
<td>$6</td>
<td>$41</td>
</tr>
</tbody>
</table>

The upper tail (top 1%) now spends 3 ½ times per capita income.

The top quartile now spends about 400 times what the bottom quartile does. In 1970, it was about 140 times the bottom quartile.
Background

• When private firms became responsible for their enrollees’ health costs, the notion of actively managing care arose.

• The task of managing care implies a need to contract with a range of health care providers.

• It also includes finding ways to encourage enrollees’ use of preventive services if doing so will save the firm money in the long run. In the modern form, managed care means finding ways to manage health behaviors as well.

• This was the advent of provider networks, a concept now considered an integral part of any discussion of health insurance.
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Economic Theory

• The combination of markets and health insurance is inherently challenging.

• The most difficult theoretical issue is the problem of *adverse selection*.  
  • Adverse selection describes a situation in which healthier individuals choose not to purchase insurance at a given price, because it is not worth it to them; also sicker individuals buy more comprehensive coverage.
  • This shifts the composition of the risk pool to being sicker and more expensive, driving the price up higher.

• Prior to the ACA, in order to mitigate the impact of adverse selection, firms adopted strategies such as *screening* and *risk segmentation*.
  • Screening means requiring a thorough health exam and history before agreeing to insure an individual.
  • Risk segmentation means creating smaller sub-markets that have different levels of risk in order to price each separately.
Economic Theory

• Even within the market approach there is potential for the government to place limits on firms’ behavior.
  • Direct regulations as well as other structures – such as bans on pre-existing conditions, bidding mechanisms, subsidy design, and risk adjustment payments – are additions meant to incentivize firms to participate in the market under the theory that many participating firms will, due to competition, lead to better outcomes.

• Some evidence suggests that the market approach, with the additional structure, works reasonably well overall.
  • For example, MedPAC reports that in 2016, 81% of MA enrollees had access to a plan that charges zero additional premium (beyond Part B).
  • However, our analysis of CMS MA plan files shows that this is actually 83% of urban enrollees and 47% of rural enrollees.
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Rural-Specific Issues

• Modern health insurance is intended to serve two functions. It is a mechanism for sharing risk, and it is a means of access to a range of providers who help manage the enrollee’s health. With respect to both functions, the current market-based insurance programs fall short in rural areas.
  
  • **Sharing risk:** because rural places by definition have smaller populations and lower population density, risk cannot be shared across many individuals.
  
  • **Access to providers:** because rural places by definition have smaller populations, there are fewer health care providers of all types, and ensuring access will be more challenging.

  • About **10%** of all Primary Care Service Areas (PCSAs) have one or fewer primary care providers
  • about **13%** have one or fewer primary care MDs
  • about **32%** have one or fewer specialists
Rural-Specific Issues

• Why are small risk pools problematic?
  • Even though each program’s reimbursement formula has a risk adjustment component, risk adjustment is a very imperfect science. Even if we had access to a person’s full claims history, this only predicts about half of the variation in future claims.
  • One can always adjust for risk *ex post*, but this essentially means the government is the true insurer; furthermore it decreases firms’ incentives to actually manage care and control claims.
Rural-Specific Issues

• So why are small risk pools especially problematic?
  • Firms must rely upon the law of large numbers to forecast the sum of claims they will face. In a large population, one can predict with some accuracy even the upper tail of the cost distribution.
    • Example: In 2014, the top 1% of health care spenders had mean spending of $107,208. The top 1% includes spenders ranging from about $75,000 to $5,000,000.
    • In a population of 100,000 people, there will be about 1000 who spend an average of $107,208, for a total cost of $107,208,000. It is very unlikely from a statistical view that the sum will deviate much from this value.
    • In a population of 1000 people, there will be about 10 who spend between $75,000 and $5,000,000. But with so few people in the upper tail, it is very uncertain whether the average will be close to $107,208. One or two outliers can move the average a lot.
    • Therefore, it is hard to “price in” the risk. In a large population, a firm can hedge by adding, say, $1,000,000 to its revenues by charging each person $10 extra. In a small population, this same hedging would cost $1000 per person, making insurance far less affordable.

• All of this takes place in an environment in which firms are pressured to show a positive return on investment every year, possibly in every quarter. The reality of managing risk is that there will be some negative as well as positive performance over time, but the focus is on consistent (positive) profitability.
Rural-Specific Issues

• The role of health insurance as a means of access also creates challenges that are more pronounced in rural areas.

• Many states have been proactive in defining what adequate access means, in the form of network adequacy standards.

• The standards mean that firms must do the work (and incur the administrative costs) of forming networks of providers who can serve a diffuse population.
  • Providers are more likely to be independent or part of small practices, rather than part of a system.
  • Administrative costs can be spread over only a small number of enrollees.

• Also, these standards, combined with sparse providers in some rural places, create opportunities for strategic behavior by firms (more on this below).
Rural-Specific Issues

• Anecdotally, when justifying exiting from a rural place, firms sometimes state that rural providers are too expensive. Their reference point is the negotiated rate that urban providers are willing to accept.

• In economics, it is a fundamental part of any cost analysis to distinguish fixed costs from variable costs.
  • Fixed costs include facilities, equipment, and EMR systems, as well as minimal-level staffing costs.
  • Variable costs are those that vary with patient volume – mainly additional staffing.

• Fixed costs must be incurred as a lump sum and recouped by adding an amount equal to average fixed cost onto the price of services.

• Variable costs are flexible and may be recouped as part of the marginal cost of seeing a patient.
Rural-Specific Issues

• The current market-based models encourage “marginal” thinking. Firms assess the cost of one more person against the benefit (i.e. the premium) they will receive for enrolling that person.

• Even when premiums can vary by geography (e.g. the Medicare Advantage benchmark is different in every county), firms will still want to keep their premium/bid as low as possible.
  • This creates an incentive to pressure rural providers to accept lower rates (if that provider is needed for network adequacy purposes) or omit providers who cannot accept lower rates (if the provider is not needed for network adequacy).
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Real World Rural Impact

• As mentioned above, the geographical unit for MA is the county.
  • Firms bid against a benchmark that is tied to prior data on fee-for-service Medicare costs in that county.
  • This encourages the firm to treat each county as a marginal decision – enter, stay, or exit?

• The geographical unit for Health Insurance Marketplaces is different in different states, but most commonly is a group of 5-10 counties including a metro or micro area.
  • State regulations vary on whether the firm must offer coverage throughout the rating area.

• The benefit of a larger rating area is a larger risk pool.

• The possible problem with a larger rating area is the formation of a network that can cover the larger area.
Real World Rural Impact

• The process of negotiating reimbursement rates ultimately depends upon a number of factors, including the market position of the insurance firm and the provider.
  • If the firm is accustomed to reimbursing marginal costs only, it may refuse to contract with a rural provider who needs fixed costs covered.

• Bargaining power of the provider is weakened when they are heavily dependent on public-dollar programs.

• Bargaining power of the firm is strengthened by policies that limit their exposure if they fail to contract with the provider.
Real World Rural Impact

• In the real world, prices are negotiated for a continuum of different health care services of varying degrees of complexity. Similar to other industries, this gives larger providers (larger hospital systems) the incentive to behave strategically in order to undercut smaller local providers.
  
  • Specifically, they can offer marginal cost (or below marginal cost) pricing on those services that smaller providers (CAHs, rural clinics, etc.) are providing, while making up their own fixed costs on the complex services for which they do not face local competition.
  
  • This undercuts the local provider’s ability to stay in the market.
  
  • It also conveys to the insurer the sense that the local provider is “too expensive” to include in their network.
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Policy Opportunities and Recommendations

• Spread risk across rural places
  • across programs
  • multi-state rating areas
  • require the rating area to be the actual service area

• Provide incentives to form nationwide plans

• Adjust payment policy to reflect the reality of fixed costs in rural
  • provider level
  • clinic or hospital level
  • public health department level
  • invest resources into rural provider affiliations to lower firms’ network formation costs
Policy Opportunities and Recommendations

• Find a way to be very transparent about network adequacy
  • rural people may tolerate a longer travel distance when necessary for specialty care, but may have strong preferences for local providers being in-network for routine and low-acuity care
  • transparency allows rural people to signal firms on these matters

Source: Bayes Impact, www.bayesimpact.org
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